

WHAT IS CLAIMED IS:

1. A method for manufacturing an optical compensated bend nematic liquid crystal display panel, said method comprising:

providing a first glass substrate, wherein a first alignment layer is formed on a surface of said first glass substrate and a plurality of first spacers are disposed on said surface of said first glass substrate;

coating a mixture consisting essentially of a plurality of liquid crystal molecules and a plurality of monomers on said surface of said first glass substrate;

irradiating said first glass substrate with UV to polymerize said monomers for forming an isolation layer on top of said mixture;

providing a second glass substrate, wherein a second alignment layer is formed on a surface of said second glass substrate and a plurality of second spacers are disposed on said surface of said second glass substrate, said liquid crystal molecules being disposed between adjacent second spacers; and

aligning and assembling said surface of said first glass substrate and said surface of said second glass substrate.

2. The method according to claim 1, wherein said first spacers and said second spacers are photo spacers.

3. The method according to claim 1, wherein said first glass substrate is a thin film transistor array substrate and said second glass substrate is an opposite substrate.

4. The method according to claim 1, wherein said first glass substrate is an opposite substrate and said second glass substrate is a thin film transistor array substrate.

5. The method according to claim 1, wherein said mixture further includes an initiator for initiating a polymerization of said monomers when said first glass substrate is irradiated with said UV.

6. The method according to claim 1, wherein after aligning and assembling said surface of said first glass substrate and said surface of said second substrate, said method further comprises curing a sealing adhesive coated on a periphery of said surface of said second glass substrate.

7. The method according to claim 1, wherein said liquid crystal molecule adjacent to said first alignment layer and said liquid crystal molecule adjacent to said second alignment layer are arranged oppositely to each other.

8. The method according to claim 1, wherein a thickness of said isolation layer is arranged from 0.1 to 10 micrometers.

9. The method according to claim 1, wherein a carbon number of side chains of said monomers is over 7.

10. A method for forming an optical compensated bend nematic liquid crystal display panel, said method comprising:

providing a first glass substrate, wherein a first alignment layer is formed on a surface of said first glass substrate;

coating a mixture consisting essentially of a plurality of liquid crystal molecules, a plurality of first monomers and a plurality of second monomers on said surface of said first glass substrate;

irradiating said first glass substrate with a first UV to polymerize said first monomers for forming a plurality of first spacers on said surface of said first glass substrate;

irradiating said first glass substrate with a second UV to polymerize said second monomers for forming an isolation layer on top of said mixture;

providing a second glass substrate, wherein a second alignment layer is formed on a surface of said second glass substrate and a plurality of second spacers are disposed on said surface of said second glass substrate, said liquid crystal molecules being disposed between adjacent second spacers; and

aligning and assembling said surface of said first glass substrate and said surface of said second glass substrate.

11. The method according to claim 10, wherein said second spacers are photo spacers.

12. The method according to claim 10, wherein said first glass substrate is a thin film transistor array substrate and said second glass substrate is an opposite substrate.

13. The method according to claim 10, wherein said first glass substrate is an opposite substrate and said second glass substrate is a thin film transistor array substrate.

14. The method according to claim 10, wherein said mixture further includes a first initiator for initiating a polymerization of said first monomers when said first glass substrate is irradiated with said first UV.

15. The method according to claim 10, wherein said mixture further includes a second initiator for initiating a polymerization of said second monomers when said first glass substrate is irradiated with said second UV.

16. The method according to claim 10, wherein after aligning and assembling said surface of said first glass substrate and said surface of said second substrate, said method

further comprises curing a sealing adhesive coated on a periphery of said surface of said second glass substrate.

17. The method according to claim 10, wherein said liquid crystal molecule adjacent to said first alignment layer and said liquid crystal molecule adjacent to said second alignment layer are arranged oppositely to each other.

18. The method according to claim 10, wherein a thickness of said isolation layer is arranged from 0.1 to 10 micrometers.

19. The method according to claim 10, wherein a carbon number of side chains of said second monomers is over 7.

20. A structure of an optical compensated bend nematic liquid crystal display panel, said structure comprising:

a thin film transistor array substrate, wherein a first alignment layer is formed on a surface of said thin film transistor array substrate and a plurality of first spacers are disposed on said surface of said thin film transistor array substrate;

an opposite substrate opposite to said thin film transistor array substrate, wherein a second alignment layer is formed on a surface of said opposite substrate and a plurality of second spacers are disposed on said surface of said opposite substrate;

a plurality of liquid crystal molecules disposed between said thin film transistor array substrate and said opposite substrate; and

means for orientating said liquid crystal molecules vertically with respect to a surface thereof, said means disposed between said thin film transistor array substrate and said opposite substrate.

21. The structure according to claim 20, wherein a thickness of said means for orientating said liquid crystal molecules vertically is arranged from 0.1 to 10 micrometers.

22. The structure according to claim 20, wherein said means for orientating said liquid crystal molecules vertically is made of polymers with side chains of carbon number over 7.

23. The structure according to claim 20, wherein said liquid crystal molecule adjacent to said first alignment layer and said liquid crystal molecule adjacent to said second alignment layer are arranged oppositely to each other.